

AMENDMENTS TO THE CLAIMS

Claims 1-20 (Canceled).

21. (New) A folding machine comprising: a pair of folding rollers rotating about axes essentially parallel to each other and defining a nip through which a web material to be folded passes, disposed on each of said rollers folding members being arranged which form folds on said web material parallel to the axis of rotation of the folding rollers; and, for each of said folding rollers, a transferring device to transfer packs of products folded by the folding rollers towards an unloading area, which transferring device includes a plurality of separating fingers movable along a closed path, from an area of engagement with folded products to an unloading area of folded products; wherein said closed path is defined by a track, said separating fingers sliding inside and projecting from said track, and wherein each folding roller is provided with an annular groove into which said separating fingers project; and wherein each said track of each said transferring device extends inside the annular groove of a respective folding roller.

22. (New) Folding machine according to claim 21, wherein each finger of said separating fingers is equipped

with a shaped guide base sliding in said track, and wherein each said shaped guide base enters the annular groove of the respective folding roller when moving along said track.

23. (New) Folding machine as claimed in claim 21, wherein on each of said folding rollers at least one folding gripper is provided, oscillating about an axis parallel to the axis of rotation of the respective folding roller, interrupted at a level of said annular groove.

24. (New) Folding machine as claimed in claim 22, wherein on each of said folding rollers at least one folding gripper is provided, oscillating about an axis parallel to the axis of rotation of the respective folding roller, interrupted at a level of said annular groove.

25. (New) Folding machine as claimed in claim 21, wherein on each of said folding rollers at least two folding members are provided.

26. (New) Folding machine as claimed in claim 22, wherein on each of said folding rollers at least two folding members are provided.

27. (New) Folding machine as claimed in claim 23, wherein on each of said folding rollers at least two folding members are provided.

28. (New) Folding machine as claimed in claim 23, wherein each of said at least one folding gripper is

equipped with an oscillating control shaft, which has an elbow configuration at the level of the annular groove, the transferring device interfering with the axis of oscillation of said control shaft.

29. (New) Folding machine as claimed in claim 24, wherein each of said at least one folding gripper is equipped with an oscillating control shaft, which has an elbow configuration at the level of the annular groove, the transferring device interfering with the axis of oscillation of said control shaft.

30. (New) Folding machine as claimed in claim 21, wherein each transferring device includes a sliding track defining said closed path for said separating fingers which extend approximately orthogonal to said track and have respective guide bases engaging slidably in said track; the track having an essentially rectilinear forward section extending from the folding rollers to said unloading area of the packs of products, and a return section; said forward section and said return section being connected by a first curvilinear end portion adjacent to the folding rollers and a second curvilinear end portion adjacent to the unloading area, the first curvilinear end portion intersecting the cylindrical surface of the respective folding roller.

31. (New) Folding machine as claimed in any one of claims 21-28, wherein each said transferring device comprises a continuous flexible member to convey the separating fingers along said closed path.

32. (New) Folding machine as claimed in claim 30, wherein each said transferring device comprises a continuous flexible member to convey the separating fingers along said closed path and said flexible member cooperates with the guide bases of the respective fingers.

33. (New) Folding machine as claimed in claim 32, wherein said flexible member is inside the closed path followed by the guide bases of said fingers, remaining constrained in a vertical space of said guide bases.

34. (New) Folding machine as claimed in claim 33, wherein said flexible member acts on a surface of said guide bases facing inside of the closed path defined by said track.

35. (New) Folding machine as claimed in claim 30, wherein a rotating inserting member is associated with the first curvilinear end portion of said track, to pick up the separating fingers from the return section of said track and insert the fingers in the forward section of said track, making said fingers travel along the corresponding curvilinear end portion of said track.

36. (New) Folding machine as claimed in claim 35, wherein said rotating inserting member penetrates said annular groove in the corresponding folding roller.

37. (New) Folding machine as claimed in claim 35, wherein each said transferring device comprises a continuous flexible member to convey the separating fingers along said closed path and wherein along a terminal part of the return section of the track and along part of the first curvilinear end portion of said track the separating fingers are not in contact with said flexible member.

38. (New) Folding machine as claimed in claim 37, wherein said flexible member is driven around a first guiding wheel associated with said rotating inserting member, axis of rotation of the first guiding wheel and axis of rotation of the rotating inserting member being parallel and eccentric.

39. (New) Folding machine as claimed in claim 38, wherein eccentricity of said axis of rotation of the first guiding wheel of the flexible member and said axis of rotation of the rotating inserting member, diameter of said first guiding wheel and diameter of the first curvilinear end portion of the track of the separating fingers being arranged and dimensioned so that bases of the fingers are not in contact with the flexible member for an angle ranging

from approximately 90° to approximately 160° of the first curvilinear end portion of the track, the fingers being brought into contact with the flexible member by the rotating inserting member at the end of said first curvilinear end portion of the track.

40. (New) Folding machine as claimed in claim 38, wherein said first guiding wheel is at least partially inside said annular groove in the respective folding roller.

41. (New) Folding machine as claimed in claim 40, wherein said rotating inserting member is controlled by means of a driving wheel meshing with said rotating inserting member, positioned on an outside of said annular groove.

42. (New) Folding machine as claimed in claim 31, wherein said continuous flexible member is a belt comprising a base layer and a shaped coating cooperating with corresponding slots in bases of the separating fingers.

43. (New) Folding machine as claimed in claim 30, wherein a rotating sprocket is disposed at a level of said second curvilinear end portion of the track of the separating fingers to pick up the fingers from the forward rectilinear section and transfer the fingers to the return section of said track.

6659/Mauro Gelli et al
[Based on PCT/IT 2004/000370]

44. (New) Folding machine as claimed in claim 43, wherein each said transferring device comprises a continuous flexible member to convey the separating fingers along said closed path and wherein at the level of said second curvilinear end portion the continuous flexible member is not in contact with the bases of the separating fingers.